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ABSTRACT

This report, prepared for a conference organized by the Council of Europe, focuses on the interdisciplinary approach to the teaching of social sciences. It describes the situation of the social subjects and religion in grades 7-9 in Sweden's nine-year comprehensive school, according to the central curriculum of 1969. The social subjects are history, geography, and civics, and religion which includes philosophy. Instructional goals are to help students become more motivated, independent, and cooperative. A major objective is to create a meaningful school situation characterized by team teaching, flexible scheduling, flexible grouping, and integration of subjects. Results of a survey conducted by the National Board of Education show that about one-fourth of the teaching of social subjects has been interdisciplinary. The greatest problem related to interdisciplinary teaching by teachers who are trained for subject teaching only is the need for careful long-term planning. Teachers find their teaching plans conflicting with the need for teaching current events and topics of student interest. National educational goals are defined as changing teacher training and developing good teaching models for the interdisciplinary approach. An example of a teaching plan for grade 7 is contained in the appendices. (ND)

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INTERDISCIPLINARY TEACHING IN THE HUMAN SCIENCES AT THE SENIOR LEVEL OF THE 9-YEAR COMPREHENSIVE SCHOOL IN SWEDEN

No. 56

April 1976

INTERDISCIPLINARY TEACHING IN THE HUMAN SCIENCES AT THE SENIOR LEVEL OF THE 9-YEAR COMPREHENSIVE SCHOOL IN SWEDEN

Göte Rudvall

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This report is written as a contribution to a meeting of experts on an interdisciplinary approach to the teaching of the human sciences in education held in Strasbourg 3-5 March 1976. The meeting was a part of the work on curricula being done by the Council of Europe's Committee for General and Technical Education. The report describes the situation in the upper level of the 9 year comprehensive school in the social orientational subjects (history, geography, civics) and religous knowledge according to the central curriculum of 1969 (Lgr69). The aims of the teaching are presented together with the recommendations to find a balance between collected teaching, integrating several subjects, and subject-bound teaching.

The organisational framework with working units composed of two or three classes to facilitate teacher cooperation and a flexible interchange between interdisciplinary and subject teaching is described and also the recommendations in the curriculum concerning planning activities. An overview is given of the different aspects which are to be considered in the practical shaping of the work. Some important results are summarized from surveys made by the National Board of Education of social orientational teaching. They show that roughly about 1/4 of the teaching in these subjects has been interdisciplinary.

At the end of the report some important problems are mentioned related to the development of more interdisciplinarity in the studies on a school level with academically trained subject teachers. Among these problems the need for careful longterm planning is considered to be one of the most important, because it can come into conflict with another important aim, the consideration of current events and whishes of the pupils. Changes in the teacher training and more development work to find good models for teaching with an interdisciplinary approach are considered important.

Keywords, EUDISED: Curriculum, social sciences, team teaching, secondary school, Council of Europe, Sweden.

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1 HISTORICAL BACKGROUND AND GENERAL CONDITIONS

When studying the Swedish school system from an international point of view, one has to take account of the fact that it has a long tradition of centralisation. Binding central timetables and curricula determine conditions in schools throughout the country. During the last ten years, there has been a move gradually to reduce the degree of centralisation, but the Swedish Parliament and Government still run matters to an extent that has little equal in other countries.

Up to the end of World War II, there was little or no difference between Swedish and other European schools. The traditional division into elementary schools and secondary schools was rarely commented on. But, after 1945, new ideas arose, and people were anxious to use the school as an instrument to make society more democratic in several respects. Sweden, not having been involved in the war, was able to invest more in improving schools than were most other European countries.

In 1950, the Swedish Parliament decided to test a 9-year school for a period of 10 years. Above all, the school reformers received inspiration from the USA, where there were schools that took care of children for at least 10 years. Reform efforts in Sweden sought to bring together: earlier European ideas of independent work by pupils (eg. Else Köhler´s activity pedagogy from Vienna), and American progressive experiences.

The aim of making the school an instrument for changing society in a democratic way had important implications for the organisation of classes, for the choice of subject matter, and for working methods.

One wished to have an organisation which was so simple that it would give the countryside the same chances as urban centres. One also wanted to equalise differences of attitudes and points of view among the different classes of society, to give them all " a common frame of reference", and to reduce the handicaps of the working class with regard to participation in higher education. In short: all pupils should be taugth together in un-streamed classes, and should only be differentiated in a few alternative courses and additional subjects during the last three years.

When choosing teaching matter, priority was given to those subjects which were of importance for understanding the age in which we live: and those which would make it possible for all to participate democratically in society. A new subject, civics, was introduced from the fourth grade of the 9-year compulsory school. In the higher grades where there were university-trained specialist teachers for each subject, the division

of the training matter in traditional subjects was not questioned, but co-ordination of the different subjects was recommended. At lower levels where one teacher taught all subjects, where was often 'collected teaching' in orientation studies, regardless of traditional divisions into subjects. In order to increase the pupils' motivation and to give them a feeling of responsibility for their studies, all pupils were offered an opportunity to choose additional courses after they had completed the compulsory basic course which was intended to give all an overall view of the teaching matter and basic concepts.

The working methods were to be characterised by activity by the pupils themselves. Group work was given an important role in order to encourage co-operation and consideration for others, especially when studying orientational subjects. Group work was also considered important in ensuring that teaching was adapted to differences in ability and interests in undifferentiated classes.

In 1962, when the 9-year compulsory comprehensive school ("the grundskola") was established, these basic ideas characterised the curriculum. The school was divided into three levels. At the lower (1-3) and middle levels (4-6), one teacher is with the pupils most of the time. At the senior level (7-9), for pupils aged 12-16, there are specialist teachers who teach two or three subjects as in the former secondary school. Classes are, in principle, unstreamed and stay together in all subjects for 8 years, exept in optional subjects (5 hours a week), and in Maths and English where there are two different courses.

Teachers found it difficult to give up the traditional way of teaching used in the old secondary school and, within the new classes at the senior level, many teachers still applied "frontal-teaching". This style of teaching made it difficult to take account of the abilities of different groups of pupils and to satisfy their interests.

A modification to the curriculum was, therefore, proposed with the aim of bringing about an organisation and a methodology which would make it easier to realise the general aims of the school, namely to combine individualisation with the promoting of social development.

In the middle of the 1960's, systematic experiments were carried out at several places in Sweden, eg. Malmö and Skellefteå, to obtain practical results which might be useful later for a new curriculum. These "pedagogical - organisational experiments" (PEDO-experiments) were, to a great extent, characterised by the use of team-teaching and the varied grouping of pupils, thus creating a more flexible school organisation

than the traditional one, especially in orientational subjects.

American ideas of team-teaching, especially those championed by Professor Lloyd Trump, have played a certain role here. New ways of planning teaching were sought with the aim of obtaining better co-ordination in the teaching of related subject matters. Experiments were first carried out at the upper secondary level, and were then introduced into the different levels of the 9-year compulsory school. In this way, it was hoped that the teaching would be more varied and organised in a way which would correspond more to the pupils' interests and also to life outside school. There was greater stress than before that the subjects should be organised in units in which the pupils could work easily on their own. These "fields of studies" were to be more independent of the traditional division of the teaching matter into subjects. Another aim was to find a form of organisation that made the most rational use of audiovisual aids and other teaching resources.

The new curriculum (Lgr 69) was established by law in 1969 and implemented in 1970. It is very rich in examples of how the teaching can be organised to promote these objectives.

As directives and recommendations in centrally laid-down curricula still play a big role in teaching in all Swedish schools, much will be said in this report in what Lgr 69 has to say concerning aims, organisation and contents of subjects. Special attention will be paid to the situation at the senior level, ie. to grades 7-9. In the curricula, it is pointed out that teachers are free to organise the teaching in the way which they themselves find to be most suitable. These examples of how team-work in interdisciplinary teaching is carried out in orientational subjects do not show how all teachers are working in Swedish schools. They are only typical of those schools which are conscientiously trying to put into practice the aims of Lgr 69. At many schools, teachers are still, to a great extent working in a traditional way. Later in this report, data will be presented to show the extent to which interdisciplinary teaching has been practised at the senior level during the first half of the 1970's.

Between 1971 and 1974, a State Commission on the Internal Work of Schools (SIA) elaborated draft priorities for some organisational changes which will make it easier to realise the aims of Lgr 69. The purpose of some of these draft proposals is to facilitate team-work, and they will be commented on later in the report, although the Swedish Parliament still has not decided on them.

The draft proposals represent a step forward with regard to decentralisation of decision-making. The local board of education would be able to decide on matters which were previously fixed by central regulations and directions.

2 SOME DEFINITIONS CONCERNING INTERPLAY BETWEEN SUBJECTS

Co-operation between different subjects can be carried out in different ways and with different degrees of intensity, ranging from a rather superficial planning to a complete integration of the teaching matter of several subjects. In the 1962 curriculum for the 9-year compulsory school, use was made, for the middle level, of the expression "collected teaching". This meant a complete integration of subject matter. A combination of "collected teaching" and more subject-bound studies was recommended for the middle level. In the same curriculum, there was mention of "co-ordinated teaching" for the senior level. The value of such teaching was especially evident when studying subjects belonging to the human sciences (social studies).

After experimental work in Malmö, an analysis was made to clarify how collected teaching and co-ordinated teaching should be carried out. (Rodhe, Christoffersson et al., 1967). These definitions are quoted here, because they make it easier to understand what Lgr 69 has to say about interdisciplinary teaching in the social studies.

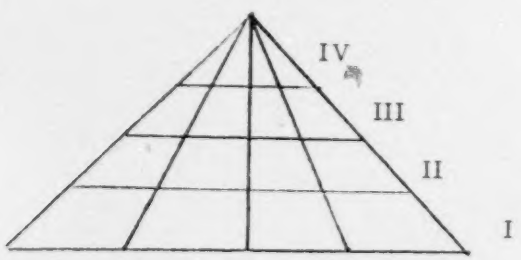
Degrees of co-operation

I. Co-operation through circumstances outside the control of the teaching teams, eg. grouping of teaching matter in the curriculum, organisation of premises and schedules.

II. Parallel study

III. Related approach to subjects, eg. through organisation of teaching matter and distrubution of matters

IV. Complete integration - abolition of subject boundaries



Definitions

Co-operation through outside circumstances:
The examples of grouping of teaching matter in the curriculum imply a form of co-ordination since it has been the aim to group similar items of different subjects in the same forms. Outer circumstances can also include general organisation of premises and teaching aids.

Parallel study:
Teachers can, by planning conferences, go a step further and organise the studies in such a way that similar teaching matter can be dealt with simultaneously in different subjects.

The related approach:
Parallel study could be planned in such a way that teachers and pupils actively establish similarities and connections among subjects.

Integration:
This term should only be used for the very far-reaching situation in which the boundaries of subjects have totally disappeared (eg. groups working about "People in Chine", "Trade and Industry in Malmö").

Fields of study (field of work, unit, project):
By "field of study" is meant a functional unit within a single subject, or a functional unit which is built up by the interplay between several subjects. (eg. Africa, the Soviet Union, the Family, the Home District).

3 AIMS OF THE TEACHING

The aims of the teaching at the 9-year comprehensive school are set out in official documents in different degrees of importance and detail.

a. The basic aims are fixed in the Schools Act which was adopted by the Swedish Parliament in 1961. Its first article says:

"The purpose of the teaching of children and young people provided by the community is to impart knowledge to the pupils and develop their skills, and, in co-operation with the home, to promote the development of pupils into well-balanced individuals, and worthy and responsible members of society".

b. The next level is the general aims and guidelines of the curriculum for the 9-year comprehensive school. These were first laid down by the King-in Council in 1962 and again, with certain minor changes, in 1969. Aims which are especially stressed are:

- to give all pupils a common frame of referense;
- to take account of individual differences;
- to promote co-operation in different forms;
- to train pupils to work on their own and to think critically;
- to create a readiness to meet changes in society and in one's career;
- to widen the pupil's sense of solidarity within, and outside, the school;
- to let the pupils share the responsibility both for their studies and the whole school environment.

c. The next concrete level is the guidelines for all subjects of orientational studies for all levels of the 9-year school. They were also established by the King-in Council. In these guidelines, the teachers are advised to concentrate more

"on teaching the pupils to understand phenomena and contexts and on offering opportunities for deeper study in selected fields of knowledge than on imparting any large body of facts. It is, also, essential to give pupils a knowledge of where information can be obtained, to train them in the selection and independent evaluation of an all-round fund of knowledge, to train their study techniques, to establish good study habits, and to try to stimulate their interest in independent studies.

Teaching shall cover orientation, suitable to the age of pupils, in matters of: religion and philosophy; social orientation;, and natural orientation" (Lgr 69, p 170).

The meaning of orientation about society is defined later on as follows:

"Social orientation shall aim at bringing home to the pupils the basic ideas of our democratic view of life, and at gradually increasing their capacity to understand themselves and their own situation, their fellow human beings and the world around them, and to make a positive contribution as citizens of our society.

Teaching should incorporate orientation on how people on this earth have shaped their conditions of life in different circumstances - with a view to creating an understanding of other people that is based on factual knowledge, to facilitating contact with other people, and to clarifying for the pupils how practical collaboration between different countries functions. Teaching should also give a picture of the lives of past generations, and the meaning of the heritage they have left behind, with the aim of creating an awareness that every age and its people should be judged from its own underlying circumstances" (p 170).

Religious knowledge is in some respects included in the social orientational subjects. When calculating the time allocated for the social orientational subjects, religious knowledge is given separate consideration. The study of views of life of religious inspiration is integrated with studies of religious and of other closely related subjects. As integration is natural when teaching history, geography and civics, the curriculum has this to say about the aim of the orientation about different outlooks of life in short:

"Orientation in 'views of life' should be given partly in conjunction with knowledge concerning the present forms, genesis, and development of Christianity and other religions. It also includes teaching about other philosophies and attitudes of life other than the religious philosophies and about basic problems and trends of thought in present-day ethics and philosophy.

One main purpose of orientational teaching is, thus, to give pupils a deeper understanding of the problems of our existence. Its aim is to impart such orientation that the pupils will be able to function as independent members of society, with an interest in the world around them which will lead to personal involvement and to a sense of international co-responsibility" (p 170).

It is stressed that the teaching matter should be so chosen that it "will broaden the pupils' cultural background, and, thus, be of value in the development of their personality".

The importance of participation by pupils in the selection of the teaching matter and the planning of the studies is stressed.

The following is said about the organisation of the teaching matter:

"It is vital that matters, which belong together in the pupils' conceptual world and daily life, should be kept together as far as possible in teaching. This will increase the opportunities for relating to the pupils' own experiences and interests. The teaching situation will be more coherent, and learning will be facilitated. At the same time, greater opportunities will arise for the pupils to take the initiative in selecting matter, and planning parts of their own course of studies" (p 171).

d. The next concrete level of the curriculum is the specific aims of each separate subject. These aims, which have also been established by the King-in-Council, include all levels of the comprehensive schoolwhere, according to the timetable, the subjects have to be taught. Examples of the formulation of aims of religious knowledge and social orientational subjects are given below.

Of religious knowledge, it is said:

"Teaching shall be broad-minded and objective in the sense that it provides factual knowledge on the import and content of different faiths and philosophies, without trying authoritatively to influence pupils to adopt a particular view. The subject should be taught in such particular view. The subject should be taught in such a way as to make pupils realise the seriousness and importance of the questions concerned to promote their personal development, and to help to create understanding of the value of personal beliefs, and understanding and respect for different opinions in these matters." (p 175).

The following is said about civics:

"The function of teaching in civics is to orientate the pupils in contemporary society, nationally and internationally. It shall also provide orientation on different occupations and career openings. Teaching shall try to bring alive for the pupils the basic ideas underlying our democratic way of life, and to stimulate them to make their own contribution to society and to become concerned with our common problems" (p 182).

Of history, it is said:

"Teaching should illustrate cultural, social, economic, scientific, technological, judicial and political development. The emphasis should be on phenomena that have specifically contributed to creating the conditions, problems and tensions prevailing in the world today. Considerable space should be devoted to the age in which we live" (p 184).

Of geography, it is said:

"The basic aims should be to show how people shape their conditions of life under different circumstances, and explore and develop the earth's resources to meet their economic, social and curtural needs. Teaching shall be so conducted as to help to create an understanding of other peoples based on factual knowledge, to facilitate contacts with other peoples, and to clarify how co-operation between different countries functions in practice" (p 186).

e. Guidelines for the actual teaching are also to be found in General Recommendations for Activities at School and in Syllabuses with Recommendations and Commentaries concerning teaching in the separate subjects. These directions, established by the National Swedish Board of Education (SÖ), have not the same binding nature as the texts established by the King-in Council. They should be looked upon as recommendations intended to clarify the government's directives.

4 ORGANISATIONAL FRAMEWORK AND RECOMMENDATIONS CONCERNING PLANNING

The time available for study of the social orientational subjects at senior level is the same throughout the country, and is fixed in the timetable timetable. This stipulates that every grade at the senior level (7-9) shall have: 5-6 hours per week of social orientational subjects (history, civics, geography) and religious knowledge togehter; and also 4-5 hours per week of natural orientational subjects (biology, physics, chemistry). The working hours of the teachers in the orientational subjects exceed those of the pupils by three hours. These so-called resource hours may be used: "to some extent for activities other than teaching in groups "to some extent for activities other than teaching in groups with one teacher, eg, teaching in groups of varying sizes, teaching involving the co-operation of several teachers, the participation of ther people, and the use of teachersubstitute aids" (Lgr 69, p 121).

Each week and in each grade, one hour of the resource time should be spent on social orientational subjects and two hours on natural orientational subjects.

The guidelines for the orientational subjects, which were mentioned earlier, point out that the teaching matter of the so-called "main phases" should:

"be arranged and presented to pupils in units which they can comprehend and handle largely on their own. Such 'fields of interest' or 'fields of work' can incorporate either matter from only one orientational subject or matter from two or more subjects.." (p 171).

In the General Recommendations of the curriculum, the meaning of these so-called 'fields of interest' or 'fields of work' is defined:

"Every attempt should be made to design these pupils' own experience, interests and problems. The systematology of individual subjects is here a secondary consideration. Matter traditionally belonging to different subjects must often be brought together to permit the allround treatment of certain phenomena and problems" (p 171).

In a section of the curriculum about planning, there are recommendations on how the work of the orientational subjects should be organised in different combinations of subject-bound and collected teaching. It is pointed out that the teaching matter should be so grouped that the demand for continuity in learning is satisfied. It is recommended that the fields of work should be grouped in sequences to help the pupils: to survey and understand facts in the surrounding world: to give them basic concepts: and to establish simple connections. With regard to the time schedule, it is pointed out that a split in the work in the subjects should be avoided.

Another recommendation stipulates that the time in the timetable should be allocated to periods of a suitable length. Preferably two orientational subjects at the most should be dealt with by the same class during one period. The daily teaching should be arranged in longer, more coherent working periods.

In a special Supplement on Curriculum Planning, suggestions for grouping the teaching matter are given, as are registers of subject-bound and collected fields of study and also examples of shorter and longer periods of planning (appendices 1 and 2). Such supplements do not have the same lasting character as other parts of the curriculum, but are intended to be revised from time to time to take account of experience.

To facilitate the interchange between the subject-bound and the recommended collected fields of work, examples are given, in the planning supplement, of the creation of blocks of working units, comprising two or three classes of all teaching in social orientation subjects, as well as natural orientational subjects. These blocks usually last two or three hours in succession. To facilitate a flexible adaption to the needs of the different subjects, it is recommended that instead of 40 minute lessons, the school day should be divided into shorter periods of 15-20 minutes. The teachers in each block of subjects (social orientational subjects, and natural orientation) are urged to form teams in order to co-operate in planning, and, where suitable, also in teaching.

Within the working units, the teaching can be arranged in different ways, depending on the wishes of the teams. It is possible to have studies in only one single subject at a time by studying the subject in periods according to a rolling schedule, but it is also possible to organise the teaching matter in wider fields of work. Certain fields of work could comprise both social and natural orientational subjects, (eg. Space, Environmental protection, and The Family (for other examples see appendix 1)). However, it is more usual to organise fields of work comprising teaching matter only from either the social orientational subjects or the natural orientational subjects, eg. the USA or Substance (see further appendix 2).

When collected fields of work are dealt with, the studies are sometimes organised in groups of different sizes where the premises allow. For example, at the beginning- two or three classes are brought togehter in one big class to obtain information. Then, the form of the

work to be carried out is discussed in smaller units. After that, a basic course is studied individually or in groups. It is recommended that the studies in depth should be carried out in so-called additional courses chosen individually or by groups. Discussion in smaller groups is also recommended. Provision is made for visits in the local community and study tours. At the end, there is often a summing-up cum assessment of the work, usually by individual class but sometimes also by all classes together.

The resource hours, which were mentioned earlier, are planned in the timetable of the week and allow extra contributions from the teachers when necessary. Sometimes, there is a need for a specialist or for more teachers for discussions or for study visits. About 20 per cent of the resource time may be used for other purposes than teaching, eg. engaging assistants or buying self-teaching aids.

According to existing regulations, the resource hours are rigidly bound to fixed subjects and levels. According to proposals by the SIA Commissions, the use of resources in the future will be less centrally directed. Thus, it might be possible for the schools themselves to decide on, and distribute, the resources among different subjects and groups of subjects.

5 CONTENTS OF TEACHING ACCORDING TO THE CURRICULUM

5.1 Main phases

In addition to the guidelines for the orientational subjects mentioned on page 7, and also in addition to what has been said on the aims of single subjects, contents are established in a binding way, by the so-called "main phases". These have been fixed by the King-in-Council, and are grouped into parts depending on the school level in order to give more freedom in the use of the teaching matter in the grades that are judged to be most suitable for it in the present conditions.

"Important events, phenomena, milieux and personalities in general and Nordic history form the early 19th century to the present-day. The origins and early stages of Western civilisation. The development of certain extra-European civilisations. Local history. Study visits. Work with different kinds of study and work material."

5.2 Guidelines and recommendations concerning grouping of teaching matter

In the General Recommendations for Activities in Schools in Lgr 69, there is a special section on grouping teaching matter. It gives a list of important questions which must be handled in two or more subjects at all levels. The importance of thorough planning to achieve the necessary interplay between the subjects concerned is stressed, and many examples are given.

These important questions and phases of teaching are the following:

Economic questions
Family questions
International questions
Consumption
Sex roles
Environmental protection
Sexual questions and living together
Instruction in road safety
Instruction on alcohol, drugs and tobacco.

Other guidelines in the curriculum concerning teaching matter published by the National Swedish Board of Education are only to be considered as examples, and are not binding for planning.

In an appendix to the Supplement for orientational subjects at the senior level, there are many examples of the fields of work distributed among the following three areas:

a. subject-bound fields of work (Group 1)

b. collected fields of work with teaching matter from principally either social orientational subjects and religious knowledge, or from natural orientational subjects (Group 2)

c. larger collected fields of work with teaching matter from social orientational subjects and natural orientational subjects and sometimes also from other subjects (Group 3).

Headings of such fields of work are presented in the special appendix 1 to this report. Examples are given in the Supplement of how planning and co-operation can be organised in order to satisfy the aims and general guidelines which have been quoted above. Examples are also given of how the teaching matter in the main phases can be grouped according to grades, partly to satisfy the need for co-ordination between related matter of subjects, partly to facilitate continuity in the pupils' knowledge of fundamental concepts, facts, and connections which can be important for further studies.

Examples are given of how the matter can be organised in main themes within different grades to make the teaching easier to grasp and more interesting to the pupils.

Examples of such main themes in social orientational subjects and religious knowledge are the following:

To be young today (Grade 7)
The struggle for the world (Grade 7)
In the local community (Grade 8)
Our Scandinavian society (Grade 8)
Ancient civilisations (Grade 9)
Global responsibility (Grade 9)

Examples are then given of how study schedules for a term and a whole academic year can be built up from such main themes (see appendix 2). It is emphasised that such examples should not be considered as binding. Other main themes can be chosen, and the division of teaching matter, as well as the choise of fields of work, can be different. These examples of outlines of study schedules and registers of fields of work have, however, been influential in the production of textbooks and other educational material and in the schools' own planning.

To give suggestions for the detailed planning of the fields of work, special material for in-service training was produced, and it was compulsory for teachers to work on it during special study days during the first year when Lgr 69 was introduced.

6 SHAPING OF THE WORK AT THE SENIOR LEVEL

The preceding parts of the report have summarised the aims of the curriculum, the general guidelines for the work, the organisational framework, and the contents of teaching matter in the human sciences for pupils at the senior level of 9-year compulsory comprehensive school. They imply a strong stress on an interdisciplinary approach to the studies.

The following part of the report will describe how planning and co-operation among the teaching staff at the senior level have been carried out in practice. Mention will be made of some problems of topical interest eg. the demands for teaching aids and special premises inspired by the new approach.

This description is based partly on a three-year study of selected schools in the Malmö region, conducted by the author at the School of Education in Malmö and partly on other sources. The most important of these other sources is the investigation carried out by the National Board of Education, and described below. (Pp 30-34).

6.1 Co-operation among the teaching staff

The bringing together of two or three classes into working units and the interchange between integrated and subject-bound fields of studies demand more thorough long-term planning in drafting than that in an organisation, where each teacher plans his own teaching independently of his colleagues. According to the recommendations in the curriculum, an outline of a study schedule for a school year, which puts chosen fields of study into an ordered sequence, must be prepared early (Appendix 2).

A school year in Sweden starts in the middle of August. It is divided into an autumn term up to Christmas and a spring term from the second week of January to the middle of June.

A large part of the spring term must be used for the gradual building-up of an outline study schedule for the following school year. In particular, consideration must be given to what teaching aids must be bought or produced. The detailed planning of the different fields of work is divided among members of the teams. A teacher responsible for each field of work is sometimes selected, and he has to devote much time to preparation and discussions with colleagues and pupils, which are so necessary for this work of planning. Attempts are, therefore, made to distribute the work among all members of the team. This saves time for other tasks, because all teachers do not have to take an active hand in all the detailed planning. A plan is made up defining when the preparations and a written

instruction for the studies of the pupils are expected to be finished; there is then a discussion about it among the members of the team. Sometimes pupils are present to give their points of view about the planning. During the school year, time is usually fixed for a team conference every week or fortnight. Furthermore, there is, of course, informal co-operation during breaks and at other opportunities.

At many schools, some hours of the resouce time have been given over to teacher s assistants (cf. above, p 12). These assistants lend a hand in arranging teaching aids and preparing materials for the lessons. They are also present in the classrooms, assisting with materials and supervising pupils. After the lessons, they return equipment to store and assist with marking papers, etc. These contributions are considered as a way of "professionalising" the teacher´s role, because the assistants look after tasks which can be done by persons other than teachers. The teachers are, thus, freed for the more specialised tasks for which they have been trained. Often, too, there are typists, whose tasks are to type and copy out assignments for the pupils.

A problem connected with team organisation, is that the teams are dependent on the team leader´s organisational skill and responsibility. These team leaders generally work more than other colleagues, and there is very little extra payment available for it. In Sweden, there is a system with remunerated senior teachers for each subject. This organisation was established before the new curriculum,but today, when team teaching and co-ordination of subject matter is considered more important than before, it is felt that there should be another form of payment. This has also been suggested by the SIA Commission, whose recommendation implies that there will be co-ordinating study leaders for each working unit, ie. two or three classes, instead of senior teachers for single subjects. This proposal has been opposed by the Teaching Unions, however. They feel that both types of co-ordinators are nedded.

6.2 Teaching aids and premises

As a result of the recommended interchange between subject-bound and collected fields of work, which can differ from one year to another, there is little use for the old type of textbooks for every subject. Instead, so-called "study kits" have been produced, containing several components for studies within one or several fields of work. Often, there are still subject-bound basic textbooks, which are used by the pupils as reference books when studying the different fields of work. The books

on fields of work, which contain complementary facts and guidance for the studies, are usually kept at school. The pupils are only allowed to take them home when studying the actual field of work.

As an example of the components of a study kit for a field of work, I would like to mention: Our Threatened Environment (Utbildningsförlaget, Stockholm). This is made up of a teacher's handbook, a study book for self-instruction, a book of facts, press cuttings, diagnostic tests, an excursion booklet, slides, sound tapes, and suggestions for supplementary reading.

The Swedish Broadcasting Corporation has made great efforts to produce study kits for teaching in integrated form, which are supported by radio and TV programmes. These efforts have been of a great importance for the introduction of Lgr 69 to facilitate organising studies of collected fields of work.

Commercially produced study sets, of course, facilitate the planning and preparatory work for the teachers, but they are very expensive and the local educational authorities cannot usually afford to buy many of them. Some teachers have also a feeling of a lack of freedom when using these teaching aids, especially when several teachers are planning the teaching together. Therefore, many teams produce their own teaching aids. This can be very hard work when teachers from different subjects have to co-operate. Probably this is one reason why some schools have returned to a more traditional subject-bound teaching, and why the number of collected fields of work in most schools has not increased since the first year when the new curriculum was put into action.

The strong emphasis on interdisciplinary teaching in the new curriculum has also influenced the shaping of premises, above all in new schools. Since the 1950's, schools with university-trained subject teachers have been equipped with special subject rooms. There is now a tendency to plan rooms for a whole group of related subjects. Special blocks or centres for all the social orientational subjects and natural orientational subjects are established, where teaching in these subjects is carried on, and where teaching aids can be stored without consideration of traditional bounds of subjects.

There is also a tendency when building new schools, to choose a relatively open design. Close to smaller rooms and rooms as large as traditional classrooms are build large, open, sound-proofed areas, which can be used by the pupils when they are doing independent work in varied

sizes of groups. These rooms are called "study halls" or complementary spaces. Resource centres have been built to store teaching material; these are centrally situated in open study spaces - choice between integrated and subject-bound studies is thus facilitated. In older school buildings, it is difficult to make changes in the premises and organise teaching resources in a way which would make interdisciplinary teaching and team-teaching possible without too much extra work. This may be another of the reasons why such teaching has not been so very widely spread. To a certain extent, some old premises are being re-built to ensure the possibility of communication between different classrooms. Sometimes, corridors are furnished to make them suitable for the pupils´ independent work.

"Open plan schools", with varying degrees of openness, have been established at several places in the country. There seem to be about fifty schools of this sort, but most of them are only for the junior or middle levels. In the region of Malmö, these schools are called "Samskap schools". (The word "Samskap" is an abbreviation, meaning co-operation between muncipalities, architects, and educationalists in south-west Skåne.) These types of schools now number about 20, and 5 of them are for the senior level. Usually the "Samskap" schools have a very open plan design, which has been regarded as too extreme by some teachers and parents. These schools impose teamwork and the varied grouping of pupils to a greater extent than some teachers consider desirable. It has been claimed that this type of premises provides neither enough peace for the pupils´ studies nor enough possibility for the teaching in closed areas that many pupils need.

Further discussion about suitable premises for the senior level has led to the designing of schools according to the so-called "home room" principle. This provides a certain openness and possibilities of flexible grouping, but the main point is that classrooms are so built that the pupils can be taught in the same room during most of the day. It means that teaching in social orientational subjects does not take place in a specialised block or centre but in a home-room. All class-rooms are also fitted out with equipment for certain natural orientational teaching and only very specific and expensive equipment is placed in special natural science laboratories or rooms. Through such a "multi-purpose" design, the architects think that they have found a balance between: the old type of school and its special subject rooms; and the new open plan school. So far, there are only a few of these home-room schools. They, too, have been criticised, especially because of the diffeculties in

pursuing laboratory working methods in the home-rooms.

To sum up, it can be said that the open plan schools and home-room schools stress differently various aspects of the general aims of the school and indicate different ways of fulfilling them. While the open plan schools stress interdisciplinarity and flexible grouping of the pupils, the home-room schools lay stress on the feeling of security and organisational stability. Uncertainty about the best design of the premises to meet the needs of the orientational subjects is still great, and this is reflected in the contradictory tendencies which are now prevailing.

7 FINANCIAL RESOURCES

The total cost to society of education has increased greatly because of the school reforms. The establishment of the 9-year compulsory school in 1962 was followed by a considerable expansion in investments in premises, teaching aids, and an expensive system of optional subjects (senior level). Consequently, education's share of the gross national product increased during the 1960's from about 4,5% to about 6,5% at the beginning of the 1970's. The part of the National Operating Budget during the same pericd increased from about 9% to about 11%. One reason for this increase was the important expansion of the upper secondary educational system. After having built up the 9-year compulsory school all over the country, and after having stabilised the number of enrolments at about 85 to 90% in the age-group, the share of the education in the gross national product ceased to increase. This share is probably decreasing gradually, so that money will be available for increased investment in nursery schools and adult education.

In 1974, the annual costs for each pupil in the "Grundskola" was estimated at 7.600 Sw. crowns, 4.500 of which was paid by the government and 3.100 by the municipalities.

The state grants to the municipalities are mainly intended for the teachers' salaries. This is the largest item of expenditure and is almost entirely paid by the State. The duties of the teachers are precisely defined in the regulations governing the State grants and this, therefore, means that there is strong central control over the use of manpower resources.

By using another method to allot State grants to the municipalities, it is planned that, in future, there will be a freer and more flexible use of resources. This would mean that the so-called "resource hours" could be used more freely at different levels and in different subjects at the discretion of local boards of education and the individual schools. A state commission is working on these questions: the SSK Commission (Skolan, staten och kommunerna-School, State and Municipalities).

The largest item of expenditure of the local government is at present the buildings. According to a survey of the situation in the whole country carried out in 1971-72 by "Svenska Kommunförbundet" (The Swedish Union of Municipalities), the total costs for buildings amounted to 47% of all school expenses. Next came school lunches with 17%. The costs of teaching materials were estimated at 13% (then = 300 Sw. crowns out of 2.600). Expenses for teaching aids accounted for about 5% of the expenses of the state and the municipalities.

Following the introduction of Lgr 69, expenditure on teaching aids

increased more than was originally estimated. The replacement of text-books of separate subjects by books on fields of work and study sets meant a very large increase in expenditure, especially on teaching aids for social orientational subjects. As a result, the earlier principle that pupils were allowed to keep most books of separate subjects as a gift in many municipalities was abandoned. Instead, there was a tendency to concentrate on the so-called "collective teaching aids", which are normally kept at school and can be used by several groups of pupils for several years. This procedure has been accentuated recently because, in general, the municipalities have had difficulties in keeping taxes at an acceptable level while at the same time being able to manage the increasing expenses within the different social sectors.

As the municipalities are responsible for the supply of teaching aids, the conditions vary from place to place, and it is difficult to generalise about the situation. The example of the city of Malmö can be mentioned. Before the establishment of Lgr 69, all pupils were allowed to keep their books in the separate social orientational subjects, but in the school year 1974-75 collective teaching aids accounted for some 80% of the aids used in these subjects. Furthermore, since the beginning of the 1970's, Malmö has kept the expenditure of teaching aids in social orientation subjects within a limit of 50 Sw. crowns per pupil. The change from letting the pupils keep their books to the purchase of a greater number of collective teaching aids which can be used for several years, has made it possible, in spite of increases in the prices of books, not only to respect an unchanged estimate of expenditure but also to build up a substantial store of teaching aids in the schools.

In 1974, the Swedish Parliament resolved that all pupils shall be given teaching aids, which provide a general view of the principal contents of the courses. This has created some uncertainty about the future development of costs.

Consideration of financial factors of this kind seems to have affected, to a certain extent, the development of integrated studies in the orientational subjects. Some of these effects are discussed later in this report.

Contributions from the State are given within special sectors where there is no possibility of getting suitable teaching aids commercially, eg. aids for special instruction and up-to-date information about facts of topical interest or educational and vocational guidance.

Publicly owned publishing firms have lately played a more important role in the production of teaching aids, but they still produce only a small

percentage of them. Research and development work both at state and municipal level is under way to find forms of production, a choice and distribution of teaching aids which are both pedagogically and financially satisfactory.

8 TEACHER TRAINING

Strong emphasis on the further training of teachers has contributed to a rapid observance of the recommendations concerning co-operation between subjects in Lgr 62 as well as in Lgr 69. Following the resolution of the Swedish Parliament on the 9-year compulsory school, a regional organisation for the further training of teachers was established in each administrative province (county) with close links with the County Boards of Education. A number of further training consultants have, in addition to their own work as teachers, been allotted the task of visiting the schools in the region, following the teaching, and convening teachers' conferences. Similar subject advisers are employed by the local Boards of Education in the big cities.

In close connection with the establishment of the new curricula, study days devoted to the main content of the reforms were organised by the State in all schools. The problems caused by the absence of information when establishing the 9-year compulsory school in 1962 led to the very thorough provision of information to all school leaders and teachers when Lgr 69 was introduced. Study material was tested on further-training consultants and other key persons at so-called "pilot courses". Participants in these pilot courses then acted as guides to all principals and directors of study in Sweden for about one week. After that, these school leaders were made responsible for the organisation of study days (2-3 days) in each school. One day was common to all levels, and was devoted to information on and discussion about the principles of the school reforms. Other sessions during these days were concerned with the different school-levels and groups of subjects. The study material for the teachers in orientational subjects was mostly devoted to showing teachers how to organise the work in the form of collected fields of work. Special films, television programmes and sound tapes illustrated these purposes.

In addition to this basic information, special material has been prepared for the school leaders, as have other special programmes for annual compulsory study days. Summer courses of one and two weeks, and courses for head teachers of different subjects (eg. during weekends) have, to a great extent, dealt with teacher co-operation and with questions about integration of teaching matter.

The extensive efforts at the beginning of the implementation of Lgr 69 probably contributed strongly to the observance, during the first year, of the recommendations about formning blocks, studies of fields of work in units, and the introduction of team work. State in-service training has been directly related to the school reforms, and this has greatly contributed to the introduction of the reforms in all schools. However, it has not been possible to follow up these initial successes in the in-service training, and consequently the ideas behind the new curriculum do not seem to have influenced the thinking of the teachers to any great degree. After rapid adaption to the new form of organisation, the conditions in most schools have stabilised at a level which seems to imply a certain return to traditional thinking concerning the separate subjects.

Efforts - for example, in the SIA Commission - to make it possible for staff and pupils to influence activities in their own school to a higher degree could be interpreted as an attempt to find new ways of bringing the school closer to the pupils' life and to making it more relevant to them.

With regard to the basic training of teachers, it has been difficult to organise this with academically trained subject teachers in a way which is adapted to the strong trend towards integration of subjects in the school itself.

Subject teachers for the senior level usually receive their theoretical training at the universities. Earlier, it was possible to choose rather freely two subjects from among a vast number of combinations, and the studies often lasted four or five years. However, during the re-organisation of university studies at the end of the 1960's and at the beginning of the 1970's, great efforts were made to create fixed courses of studies lasting three years. The syllabuses of the different subjects were revised in order to make their contents correspond better to the needs of the school. Combinations of three subjects were created for teachers who intended to teach at the senior level of the 9-year compulsory school. Courses of two subjects in greater depth were initiated for those who wanted to teach in upper secondary school. The aim of the arrangement of three subjects is to avoid having too great a variety of teachers for the pupils at the senior level. Moreover, a combination of three subjects also facilitates a co-ordination between subjects without having to devise extensive organisational measures involving severel teachers. Teachers with both two and with three subjects are qualified to teach at the senior level, but the interest in studying two subjects more thoroughly has been so great that the number of teachers with three subjects has been lower

than was originally estimated. Other educational reforms have also made it difficult to obtain teachers with three subjects to the senior level. There has long been a wish to give teachers the possibility of combining a practical or artistic subject, eg. domestic science, arts, and music with a theoretical subject. This has recently been suggested by a state commission. For these reasons, it will be necessary, for a long time to come, to make extensive use of team-work to carry out interdisciplinary teaching on a large scale at the senior level.

The basic practical teacher training was re-organised in 1968, before the revision of the curriculum for the 9-year compulsory school was finished. All practical training of teachers for the 9-year compulsory school is carried on at "schools of education". There are six larger schools of education where all teachers receive their training, as well as a number of smaller schools of education for teachers of the junior and middle levels. Near to the teacher-training institutions are experimental and demonstration schools. These strengthen the link between the theoretical and practical training, och provide opportunities for scientifically based development work.

After their studies at the university, the prospective teachers in academic subjects at the senior level and in the integrated upper secondary school receive one year of practical training at a school of education. One term is spent at the teacher training institution, and most of the finishing term at schools in the surrounding area. During a period of about four weeks at the end of this term, the student teachers return to the school of education to complete their training. Lecturers in methodology, who usually teach only one subject, are responsible for the work on teaching methods and the supervision of the teacher trainees in co-operation with specially appointed tutors at the schools. Teachers in educational theory are responsible for pedagogical, sociological, and psychological questions.

There has been some difficulty in co-ordinating the methodology of different subjects and educational theory in a way which meets the demand for co-operation recommended in the curriculum. At present, there are experiments with different forms of so-called "need-oriented team-work", where the teaching is planned according to the teacher's need, in close co-operation between teacher trainees and different lecturers in teaching methodology and in educational theory at the schools of education.

A special state commission was appointed in 1974 to review all teacher training. This commission has been asked to investigate how the traditionally great differences between teachers at the various levels could

be reduced.. The commissions is also interested in finding out how to make teacher training realise the objectives of the new curricula more effectively. The commission is also investigating what changes in teacher training would establish a closer relationship with society and a lowering of the barriers between pure teaching and other activities at school. Proposals to change the school in this way have been made by the State Commission on the Internal work of Schools (SIA).

9 ASSESSMENT OF PUPILS' RESULTS

In Sweden, during the last decade, there has been a lively discussion on how to evaluate the results of the pupils' studies. Through Lgr 62, a consistent "relative", grade system, using a scale of five grades, without pass or fail marks was introduced all over the country. Standard tests of skills are carried out for different subjects such as swedish, mathematics and foreign languages. The standard of the classes in these subjects are supposed to be normative for marks in other subjects.

In the past, the pupils were given marks every term, but now marks are given only in the last term in Grade 3 at the junior level and the last term in Grade 6 at the middle level. At the senior level, the pupils are given marks at the end of the spring term in Grade 7 and then every term in Grade 8 and 9. So-called "quarter-of-an-hour talks" between teachers and parents are compulsory during those terms when no marks are given.

At the middle level, a total is usually given for the orientational subjects, instead of grades in each subject. At the senior level, if the teachers so desire, a total grade may be given in the social and in the natural orientational subjects instead of grades in each subject. This possibility has been introduced to facilitate interchange between collected and subject-bound studies of fields of work according to the recommendations of the curriculum. Marking problems, therefore, need not make collected teaching difficult.

The relative grade system, described above, has been criticised as inhibiting co-operation and as a cause of an increasingly competitive attitude among the pupils. It is argued that group work is made more difficult if the pupils are uncertain how their individual performance will be marked. Such tendencies and the wish to replace a group-related assessment by a more all-round individually-related one at the 9-year compulsory school led to the setting up, in 1973, of a parliamentary commission on marking problems in schools. This commission has hinted at the possibility of abolishing the traditional marking in the whole 9-year compulsory school, except perhaps in the last grade, where it is seen as a selection instrument for admission to different fields of education and sometimes for the first employment.

The need for contact between the school and the home concerning pupils' study results should, moreover, be satisfied by discussions between teachers and parents every school year. The above-mentioned "quarter-of-an-hour talks" are supposed to be compulsory.

10 EVALUATION OF THE EFFECTIVENESS OF THE TEACHING

The great changes in the Swedish educational system during the last fifteen years have led to more emphasis on the social and affective aims of education. Within the cognitive field, there has been, among other things, a change of emphasis away from memorised knowledge and towards a stress on skills and the ability to seek information by oneself. The development of creative ability and an enquiring critical attitude are other important aims, which are stressed more today than before.

The changed aims with a changed organisation and changed methods of teaching have created a lively debate about the effectiveness of the education. The new school has been criticised from contradictory points of view. Some critics say that it still over-emphasises easily controlled memorised subject matter. Others claim that, to a great extent, it has given up its function of imparting knowledge without, on the other hand, having been able to realise the new social and affective objectives to a particularly high degree.

A demand for an all-round, unbiased evaluation of the effectiveness of the school, therefore, has come from different directions. Every year, large grants from the State for research and development projects are given, mainly through the National Board of Education. This research is mostly carried on at educational research institutes of the schools of education but also at the educational and sociological research institutes of the universities. A special Educational Committee at the National Board of Education, representing different interests in society, including members of Parliament, follows work on education very closely.

Grants from the State are also given to some municipalities for the development work on the realisation of the political aims of the school. There are also experiments on new ways of organising schools within so-called "educational development centres" made up of several municipalities. These obtain grants from the State for a period of about five years. By the end of the period these centres are supposed to have obtained results which can be incorporated in the regular activities of the school.

Earlier in this report (page 2) mention was made of the experimental activity carried out at the end of the 1960's to test and develop fields of work and an integrated teaching in orientational subjects. It has scarcely been possible to carry out a systematic evaluation of the effects of integrated teaching in social orientation subjects as recommended by Lgr 69 because of the short time in which the new curriculum has been in force.

The investigations, which have been carried out by the National Board of Education and which are presented in the following section, have primarily been of a descriptive nature.

The effectiveness of the Swedish school system compared with that of other countries, is illustrated in some respects by the international Evaluation of Educational Achievement (IEA) project, which has been carried out in co-operation with UNESCO, and during which comparisons were made of the performance of pupils in 21 countries, in several subjects including mathematics and natural science subjects. In this survey, Swedish pupils have att ined proportionately good results where cognitive knowledge was concerned, but on the other hand, their motivation for their studies was low. The project has been in progress for a long time, and the results, therefore, hardly illustrate the results of the great changes which have taken place in education in the past five years.

11 SURVEYS OF SOCIAL ORIENTATIONAL TEACHING

11.1 Presentation of two surveys

The curriculum of 1969 came into force during the school year 1970/71 in the Grades 1, 4 och 7. It was not until the school year 1973/74 that it was fully in force throughout the whole comprehensive school.

The National Board of Education is continuously following the implementation of the curriculum in the comprehensive school. As a part of this work at the beginning of the school years 1971/72, 1972/73 and 1973/74, some questionnaires were sent to principals in school districts chosen at random and corresponding to about 10% of the number of districts in the whole country. The information obtained from replies to the questionnaire made it possible to follow the organisation of teaching in social orientational subjects at the senior level during the first three years of the 1969 curriculum. From the answers received, it can be seen that team-teaching in social orientational subjects during these years has been rather stable and represents between 20% and 25% of the teaching time. In natural orientational subjects, the percentage is rather less, between 10% and 15%: there has been a drop from the 20% of the first year.

Another investigation was carried out in 1972 by the National Board of Education. 256 teachers in social orientational subjects in 40 schools, chosen at random in all the counties of the country, answered a rather detailed questionnaire. About half of the teachers of social orientational subjects answered that they only practice subject-bound teaching. The percentage was about 2/3 for the teachers in the natural orientational subjects.

Below is a very short selection of the other results which illustrate the questions treated in the present report.

11.2 The planning for a school year

About 3/4 of the teachers stated that they have followed, either fully or in part, the example of planning for the school year given in the textbooks, and other teaching aids. About half said that they did their own planning. In all cases, positive results are reported from the planning work. The teachers think that it gives consistency and stability to the teaching. Textbook authors have usually adopted the example of planning

for the school year given in the curriculum. Thus these examples have had a very decisive effect on the teaching.

11.3 Questions of schedules

The teachers had been asked to say which alternative they had used from the examples of schedules. The most common variation was the one with working units and studies in periods, which makes it possible to change between collected and subject-bound studies (16 schools out of 40). 9 out of the 40 schools used an alternative under which every subject is studied separately without working in periods. This is at variance with the recommendations of the curriculum, and splits up the teaching situation into studies in several subjects, with each one only having one hour per week.

Studies in periods in some form with one field of work (subject-bound or collected) studied during the 5 hours per week reserved for the group of subjects were reported by a little more than half the teachers. About 2/3 expressed mainly positive results.

Longer, coherent working periods (60-80 minutes), were reported by 4/5 of the teachers. 2/3 reported positive results and only very few reported negative. Of the 1/4 who reported the use of still longer working periods (100 to 120 minutes) about 1/2 express mainly negative results.

11.4 Co-operation in teams

Team co-operation for outlining plans for the school year are reported by 3/4 of the teachers. More than 2/3 report mainly positive results and very few report negative. Co-operation for detailed planning fields of work are reported by about 1/3 of the teachers, 4/5 of them report positive experiences.

Participation of pupils in the planning for a new school year has been reported by about 1/5 of the teachers. A little more than 1/4 of them have reported positive results; only very few were negative. Most of the teachers gave a non-comittal answer.

Pupil's participation in detailed planning for fields of work has also been reported by about 1/5 of the teachers. Nearly half of them reported positive results, and 15% negative ones. The choice by pupils of single fields of work was reported by about half of the teachers. About 40% reacted in a positive way, and very few in a negative one.

Participation of the pupils in evaluation of the work has been reported by about 2/5 of the teachers, and the same proportion reported positive results.

Generally, co-operation in teams has been felt to be positive and worthwhile, but often cumbersome. Participation by the pupils is often considered positive, but difficult to carry out in a systematic way. Reasons given for the relatively small number of pupils who do participate are: partly organisational conditions, eg. difficulties of finding time and well suited forms; and partly that the pupils are not considered sufficiently experienced and motivated for participation.

The resource hours are mainly used for splitting the class into two groups (about 2/3). Positive experiences are reported by 4/5 of the teachers, and there are practically no reports of negative experiences.

Co-operation between teachers when actually teaching, ie.having more than one teacher for one class of pupils at the same time, is reported to have occurred occasionally by half the teachers. 2/3 of them reported positive, and 1/5 negative results.

1/3 of the teachers reported that the resource hours are used in a flexible way, and nearly 2/3 report that this functioned very well or well. On the whole, the teachers had a positive attitude towards the resource hours, which provided opportunities for smaller groups of pupils and sometimes for assistance from other experts. Even so, some uncertainity is reported about the best way to use the resource hours.

11.5 Organisation of the teaching matter

The number of fields of work in the social orientational subjects varies from 15 to 30 in one school year. The number of collected fields of work in Grade 7 is usually reported to be only two or three, and in Grade 8, one or two. In Grade 8, compulsory study visits to different firms and institutions for guidance about careers take up much time. The summing up and the discussions of these visits take place most frequently in subject-bound fields of work in civics.

Collected fields of work in a larger number or orientational subjects of the so-called "group 3 type" (examples see Appendix 1), are reported only to a very limited extent. 9 of the 40 schools in Grade 7 report that one such field of work is studied, and 5 schools in Grade 8. Only 6 schools report that more than one of such fields of work is studied in Grade 7, and 7 schools in Grade 8. Only 15% of the teachers have reported that they have taught the group 3 field of work. 2/3 have reported that they have worked with the "group 2" field of work (see Appendix 1) in more than one of the social orientational subjects. 1/5 have reported that they sometimes

have co-operated with a natural orientational teacher in collected teaching. About 40% said that, in connection with studies of collected fields of work, they have been teaching subjects which are outside their own formal competence. Slightly over half the teachers report mainly positive results, except when speaking of larger group 3 field of work, when more than half have a neutral attitude.

The division into basic and additional courses, made in textbooks and other teaching aids, has, on the whole, been followed by about 70% of the teachers. A little more than half of them have reported positive experiences, and very few negative. Organisation by teachers of basic and additional courses have been reported by about 80% of the teachers. 4/5 of them have reported positive experiences.

About 30% have used study-tasks given by the textbooks without making many changes. 3/4 have drawn up additional study tasks themselves. Even if the textbooks and teaching aids have decisively influenced the choice of teaching matter, only a small number of the teachers have wholly followed the proposals of the textbooks in the designing of study tasks.

11.6 Form of teaching and working methods

One question in the questionnaire was about how much the various forms of teaching are used. The forms are said to be used in the following order:

1) individual work
2) collective teaching
3) group work
4) discussion
5) study visits and excursions
6) other forms

Generally speaking teachers feel that the forms of teaching are greatly influenced by textbooks and teaching aids. They, therefore, have a tendency to be one-sided. The teachers spoke most positively of collective and individual teaching. Slightly more than 2/3 expressed positive opinions towards these types of teaching. There is almost a total lack of negative opinions.

About 1/3 express positive opinions towards group work, discussion and study visits.

11.7 Textbooks and other teaching aids

Use of only one commercially produced textbook during the whole school year was reported by about 3/4 of the teachers. Nearly half of them considered that this functions well: about 10% have had negative results.

Use of more than one textbook during the school year is reported by

about 1/3 of the teachers. About 2/3 have reported positive results, and there were no reports of negative ones. Use of material mainly produced in the school for a few fields of work was reported by about half the teachers. 3/4 reported positive experiences. Material produced in school for most of the studied fields of work was reported by 6%. The opinions were mostly positive.

Teachers have generally declared themselves satisfied with commercially produced factual material. They have not been satisfied with existing study books (ie. printed study directions), however. These have been considered too stereotyped, too restrictive etc.

12 DISCUSSION AND SUMMARY

When describing the integration of teaching matter in the senior level of the comprehensive school, with its system of subject teachers, it is difficult to isolate it from other attempts to give the pupils a more meaningful school situation through organisational innovations. These attempts can be summarised in the phrase "a more flexible school". This is characterised by team-teaching, flexible scheduling, flexible grouping and integration of subjects. One is trying, in Sweden, in different ways, to break up the traditional pattern of "one teacher/one class/one lesson/ /one textbook/one classroom".

12.1 Different accentuations of aims

As has been shown in an earlier part of this report, there are several motives for trying to integrate subject matter in the teaching of the human sciences. Some of them are summarised below:

1) To increase pupils' motivation through a treatment of the teaching matter which corresponds to reality outside school, eg. through the mass media

2) To give pupils a more coherent work situation with more continuous time for work on their own

3) To give more practice in co-operation. This means both the training of pupils to co-operate amongst themselves, and giving them opportunities to see adults working together. Another aim is to give the teachers an attitude towards co-operation which they can pass on to the pupils

4) To produce more effective teaching. The co-ordination of subjects can, for instance, save time and provide opportunities for the more rational use of staff, teaching aids and premises.

These different aims can be stressed in various ways. When people have expressed different opinions about the value of integrated studies in school it is not always made clear which part of the above-mentioned aims they have most taken into consideration.

In the discussions about schools in Sweden, there has been during the last few years, a certain tension between: what could be called a democratic co-planning point of view: and the point of view of educational technology. The former stresses the importance of continuous planning in co-operation with pupils in order to attain the general aims of the school. The latter stresses more strongly the importance of a systematic building up of skills and concepts, and emphasises, therefore, more the importance of thorough long-term planning and detailed structuring of the teaching matter.

The general opinion seems to be in favour of the democratic aspects, but, in practice, the situation is governed to a high degree by organisation and teaching aids and seem to be more influenced by the point of view of educational technology. The debate on the best balance between these two points of view is still lively. Development work is under way to formulate the aims in more precise terms in order to make it easier to take account of the general goals of educatron in the practical school situation.

The following summarises some problems related to attempts to have more integrated teaching of the human sciences at the senior level.

12.2 . Problems related to organisation

Earlier in this report a description was given of the functioning of the organisation, which has been created to facilitate interchange between integrated teaching and subject teaching in periods. By bringing together several parallell classes in blocks or working units, the organisation is, in principle, very flexible. Many of the limitations and barriers to the grouping of teaching matter, team-teaching and the flexible grouping of the pupils which exist in the traditional subject-teacher organisation are thus abolished. But other problems arise.

A form of planning, which tries to integrate to a high degree the teaching matter from different subjects, encounters many problems arising form the structure of the traditional subjects. There are problems of chronology in history, the building of concepts in civics, training in map-reading in geography, etc. Such problems make many teachers reluctant towards the idea of a high degree of integration.

The planning for at least one term at a time sometimes makes it difficult to take account of current events and other circumstances which should modify the planning. In the traditional organisation with one teacher, who is responsible for all planning and teaching, it can be difficult to organise co-operation between different classes. This type of rigidity is sometimes replaced nowadays by what can be called a rigidity of planning. These problems can probably be overcome with experience. Some methods, which are being introduced to counteract them, are using a lot of reserve time in the planning, and a lot of time for optional fields of work.

12.3 Problems concerning the working situation of the staff

Emphasis on new aims and new organisational conditions have created a changed working situation for the teachers.

The time used for direct teaching tasks will be relatively less than in the past, and time used for planning and co-operation outside the teaching situation will be greater. The number of lessons can be varied during different parts of the school year through interchange between integrated fields of studies and subject bound studies in periods. This requires different contributions from various subject specialists during the different periods. New types of tasks grow up which create a need for new auxiliary personnel. At the same time, there are increased demands for greater flexibility in the teachers' work.

12.4 Problems concerning the working situation of the pupils

The increased emphasis on integration of teaching matter has entailed the development of greater independent study skills among pupils and greater demands for co-operation in the studies. In general, the participation of the pupils in the planning of the studies does not yet seem to have been very far reaching. Mostly, it seems to have been limited to the choice of teaching and working methods in fields of work, where the teachers have already done most of the planning. It seems also to be usual that an assessment of the study of a field of work is carried out and used as a basis for the teachers' planning in similar situations later on.

To give all pupils an opportunity to work with the teaching matter according to their ability, rather detailed study-tasks in the form of simple exercises in the textbook (eg. filling in uncompleted sentences) have come to play a large role at the expense of discussions and more independent tasks favouring creativity and social development. Rigid planning of the time available for the fields of work probably plays an important role here.

12.5 Problems concerning teaching aids and premises

The present situation and general tendencies concerning pedagogic aids and premises have already been described. Here, therefore, I will only stress that teaching aids ought to be so designed that they are not too directive. Instead, they should stimulate independent work and co-operation which can be of value to all pupils, regardless of their different levels of ability. The intention to introduce more controversial material to contribute to a lively and many-sided debate about the questions facing society is also worth mentioning. It can strengthen the involvement of the pupils and develop critical thinking. The desire to make teaching

aids and premises sufficiently flexible for the different aims of the teaching is evident. It is sometimes hampered, however, by economic considerations, which claim that existing study material and premises should be rapidly amortized. This entails considerably early planning which, to a certain degree, is in contradiction with the declared aim of taking account of the wishes of the pupils and teachers and of the actual circumstances. Financial restrictions also have positive effects, hovever. Traditional barriers between subjects are abolished, and the need for more common use of teaching aids and premises stimulates creative thinking on how to make better use of resources, through co-operation and integrated teaching. Experiments to allow the schools more freedom in the choice of teachers' aids, within certain financial limits, have already shown positive results, both pedagogically and economically. The National Board of Education develops these aids, and organises courses which train the teachers to choose the most suitable pedagogic aids for the situation in hand. Research into the design of school buildings also has a high priority, and is conducted in different parts of the country.

12.6 Concluding remarks

In conclusion, it can be said, that after five years, the degree of integrated teaching in human sciences at the senior level has, on the whole, stabilised at the level which was reached after the first school year following its introduction. Traditional patterns of organisation have been perpetuated with 3/4 of the teaching time used for single subject teaching, and only 1/4 for collected teaching involving some form of integration.

It is recognised that teacher training plays a prominent role in changing the situation, and reforms are therefore, in preparation. On the basis of the work of two State commissions, a more liberal use of personnel and of financial resources, as well as a more decentralised decision-making apparatus for the school is being prepared. Proposals are being put forward to find new forms of organisation in order to stimulate team-teaching and the co-ordination of teaching matter, and to encourage a more pupil-centred and topical approach to the teaching of the orientational subjects.

REGISTER OF EXAMPLES OF FIELDS OF WORK (LGR 69, SUPPLEMENT, ORIENTATIONAL SUBJECTS

Group 3:

Collected fields of work in a large number of orientational subjects

Os 1	To be at senior level. School democracy
Os 2	To be two
Os 3	Alcohol, drugs and tabacco
Os 4	Fire-defence
Os 5	Traffic
Os 6	The threatened environment

Group 2:

Collected fields of work within social orientational subjects and religious knowledge

So 1	To be young today
So 2	To be a human being
So 3	To be two
So 4	People who are different
So 5	To nurse and help
So 6	To face violence
So 7	Our own society
So 8	Finances of society
So 9	Popular movements and other organisations
So 10	Industry and careers in Scandianvia
So 11	The industrial enterprise
So 12	To travel
So 13	Sweden, Scandinavia and the world
So 14	Western Europe
So 15	The USA
So 16	The Soviet Union
So 17	The era of the two World Wars
So 18	Developing countries today
So 19	South - and East Asia
So 20	The Arab world
So 21	Africa
So 22	Latin America
So 23	A distressed world
So 24	The threatened environment
So 25	Ancient Greece
So 26	The Roman empire
So 27	Egypt in olden days and now

Group 1:

Subject-bound fields of work of religious knowledge

Re 1	The religious life of the native place
Re 2	Christianity in Scandinavia during the last hundred years
Re 3	European church communion
Re 5	Churches in the "Third World"
Re 6	The Bible as a book, a revolutionary document and a source of inspiration
Re 7	The primeval tales about the world and the human being
Re 8	Moses. The pact of Jahve - Israel
Re 9	The prophets of the Old Testament
Re 10	Jesus in the New Testament
Re 11	Jesus as Christ - faith and debate today
Re 12	St. Paul, the apostle
Re 13	The Apocalypse
Re 14	Judaism
Re 15	Islamism
Re 16	Hinduism
Re 17	Buddism
Re 18	The religions of primitive peoples
Re 19	Religion and philosophy of ancient Greece
Re 20	To be young today
Re 21	To be two
Re 22	In one´s home
Re 23	To nurse and help
Re 24	The ethics of work
Re 25	Leisure time and self-realisation
Re 26	To face violence - to use violence
Re 27	In the world communion
Re 28	To be a human being
Re 29	Comparison

Group 1:

Subject-bound fields of work of civics

C1	To be at senior level. School democracy
C2	Work and the work environment
C3	Training and the labour market
C4	To be young today
C5	To be two
C6	To nurse and help
C7	Alcohol, drugs and tobacco
C8	Our own society
C9	To take care of one´s finances
C10	Social financies
C11	Popular movements and other organisations
C12	The political life and government of Sweden
C13	Law and justice
C14	Democracy and dictatorship
C15	Traffic
C16	The threatened environment
C17	Our defence
C18	Towards a united world

Group 1:

Subject-bound fields of work in history

Hi 1	Revolutions which have changed the world
Hi 2	Europe and the world during the 19th century
Hi 3	The era of the two World Wars
Hi 4	The birth of the great powers
Hi 5	The Colonies become independent
Hi 6	The Arab world and Israel
Hi 7	The society of the estates becomes class society
Hi 8	Democracy grows up in Scandianvia
Hi 9	The dawn of curture
Hi 10	Ancient Greece
Hi 11	The Roman Empire
Hi 12	The great migrations
Hi 13	The history of South and East Asia
Hi 14	Latin America
Hi 15	The history of our own society
Hi 16	Historical length sections
Hi 17	Technology captures the world

Group 1:

Subject-bound fields of work of geography

Ge 1	Western Europe
Ge 2	The USA
Ge 3	The Soviet Union
Ge 4	The USA and the Soviet Union
Ge 5	By the Mediterranean
Ge 6	India
Ge 7	East Asia
Ge 8	The Arab World and Israel
Ge 9	Africa
Ge 10	Latin America
Ge 11	To travel
Ge 12	Can the earth feed us?
Ge 13	The provision of world energy
Ge 14	Some key industries
Ge 15	The trade of the world
Ge 16	The nature and climate of the world
Ge 17	The sea
Ge 18	The nature and climate of Scandianvia
Ge 19	Industries in Scandinavia
Ge 20	Town and countryside
Ge 21	Communications in Scandianvia
Ge 22	Financial co-operation in Scandinavia
Ge 23	Our own society
Ge 24	The threatened environment

Example of plan for one term, grade 7
(from Fortbildningsmaterial, Lgr 69)

Week	7a	7b	7c
34	To be at Senior Level		
35	Nature and Climate of the World		
36			
37			
38	The Bible as a book	Revolutions	Freely chosen field of work
39	Freely chosen field of work	The Bible as a book	Revolutions
40	Revolutions	Freely chosen field of work	The Bible as a book
41	European church communion	Europe and the world during the 19th century	Western Europe
42			
43	Western Europe	European church communion	Europe and the world during the 19th century
44			
45	Europe and the world during the 19th century	Western Europe	European church communion
46			
47		Young Today	
48			
49		Reserve time	
50			
51			

SHORT GLOSSARY

Collected teaching = integrated teaching. Certain themes or problems are studied including teaching matter from several subjects without taking into consideration the subject barriers.

Field of study, field of work, field of interest. All these terms are synonyms. They mean structuring of teaching matter in a way that it can be experienced by the pupils as a unit which they can overview and to a great extent study on their own.
The term field of interest is mainly used on the lower and medium level while the two other terms are mainly used on the senior level.

Group 1, 2 and 3 fields of work. The examples of fields of work in the curriculum are divided into three different types considering the organisation of the teaching matter.(Examples see appendix 1).
The group 1 belong subject-bound fields of work which have their teaching matter organised totally within the frame of a single subject. Collected fields of work are of two types. Group 2-type has its teaching matter organised inside the sector of social orientational subjects (including religious knowledge) or sinside the natural orientational subjects. Group 3-type consists of bigger fields of work including teaching matter both from the social and natural orientational subjects and sometimes also from other subjects.

Main phases. Directions by the Government in the curriculum of the compulsory school establish what teaching matter shall be studied in different subjects. These main phases are formulated in very general terms and are only fixed to a certain school level. The teaching teams in the individual schools are free to choose teaching matter more in detail and group it in different grades within a certain level.

Orientational studies. The term includes orientation in matters of religion land philosophy, social orientation and natural orientation. At the senior level the orientational studies are covered by the subjects religious knowledge, geography, civics, history, chemistry, physics and biology.

Resource hours. According to the timetable, fexed by Parliament, means are available in certain subjects for extra teaching hours. These means can be used for dividing a class into smaller groups or for having more than one teacher during the same lesson. They can also be used to pay experts from outside school. A smaller part of the resource hours (20%) can also be used for non-teaching personnel (for instance teacher assistants) or for self-instructional teaching aids. The teaching teams in the local schools decide how to use the resource hours.

Sequences. Recommendations are given in the curriculum that different fields of works in the orientational subjects should be organised in a time sequence that facts and concepts which are important for understanding teaching matter in other fields of work are studied first. These recommendations are considered to be of special importance in natural orientational subjects.

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